



Test Case



TC47 Test TW calc with STW

**Belongs to Suite(s):** TS18 NMEA simulator ...**Case Type:** Functionality**Label(s):** windows**Test Quality:** 😊 **EXCELLENT** Defects Closed Fixed**Assign To:**  Petri Makijarvi**Case Priority:** Medium**Estimate:** 15**Is Automated****Precondition**

There shall be a NMEA simulator on which the sentences VHW for STW, MWV for AWS and AWA, HDG for HDT shall be fully controlled to be static and not moving in any way. (In this test case NMEA Simulator <http://www.kave.fi/Apps/> is used - there are few steps which are specific to its version, if new versions or other products exists, or other simulator is used, one can skip those steps without a record other than for instruction for the future tests).

At the end of test we make a conversion sanity check using true wind converter and vector visualization application <http://www.starpath.com/freeware/truewind-setup.exe> - on other platforms similar on-line services can be used.

StepsClick "Tab" or "Shift + Tab" to navigate grid 

- 1  Set up the com0com port for the simulator as follows 

```
command> install PortName=COM29 PortName=COM30
          CNCA1 PortName=COM29
          CNCB1 PortName=COM30
ComDB: COM29 - logged as "in use"
ComDB: COM30 - logged as "in use"
command>
```




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- 5  Select the sentences to be sent out in NMEA emulator:



Options

General	NMEA0183	NMEA2000	Track	Limits	
NMEA0183 Port: COM29 <input checked="" type="checkbox"/> Use list					
NMEA0183 baud rate: 4800					
NMEA0183 HDX send delay (ms): 1000					
NMEA0183 sentences to be sent					
HDG	<input type="checkbox"/> Heading	RSA	<input type="checkbox"/> Rudder Sensor Angle	MWD	<input type="checkbox"/> (True wind info)
HDT	<input checked="" type="checkbox"/> True heading	MTW	<input type="checkbox"/> Mean Temperature of Water	MWV	<input checked="" type="checkbox"/> (Relative wind info)
GLL	<input checked="" type="checkbox"/> Geographic Position	DPT	<input type="checkbox"/> Depth of Water	MWV	<input type="checkbox"/> (True wind info)
KAC	<input type="checkbox"/> Recomm. Min. Nav. Info.	VHW	<input checked="" type="checkbox"/> Water speed and heading	VWR	<input type="checkbox"/> (Relative wind info)
GGA	<input checked="" type="checkbox"/> Global Pos. System Fix Data	RPM	<input type="checkbox"/> Engine RPM		
VTG	<input type="checkbox"/> Ground speed				
ZDA	<input checked="" type="checkbox"/> Time,date,UTC,dmy,time zone				



- 6  In Dashboard, select the speed value to m/s since it is used NMEA Simulator, this facilitates the test but is not mandatory.



Dashboard_Tactics preferences

Dashboard_Tactics | Appearance | Tactics Performance Parameters

Fonts

Title: Arial, 10

Data: Arial, 14

Label: Arial, 8

Small: Arial, 8

Units, Ranges, Formats

Speedometer max value: 12

Speed Over Ground Damping Factor: 0

COG Damping Factor: 0

Local Time Offset From UTC: 00:00

Boat speed units: Kts

Depth units: Meters

Depth Offset (Meters): 0

Distance units: Nautical miles

Wind speed units: m/s

Temperature units: Celsius

OK Cancel




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- 9  Prepare the Tactics module to calculate silently the true wind using AWS, AWA, HDT and STW. This means, no options selected here:

True Wind

<input type="checkbox"/> Correct STW with Leeway	<input type="checkbox"/> Correct AWS/AWA with Heel
<input type="checkbox"/> Force True Wind Calculation	<input type="checkbox"/> Use SOG instead of STW for True Wind Calc
<input type="checkbox"/> Show Wind Barb on Chart (OpenGL)	



- 10  Prepare a dedicated dashboard like this (it will be used in the next test case also), start the "run" on NMEA emulator and observe that you get the same values as indicated by the NMEA emulator **and** the NMEA sentences :


TW Calc Test

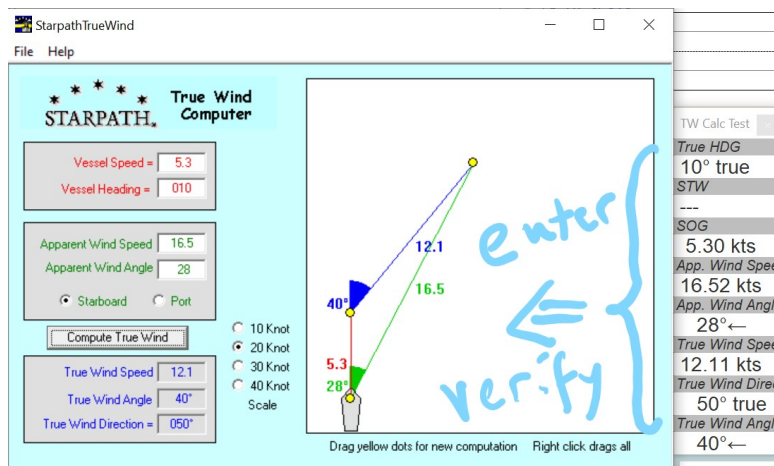
True HDG
10° true
STW
5.00 kts
SOG

App. Wind Speed
8.30 m/s
App. Wind Angle
29°<
True Wind Speed
6.17 m/s
True Wind Direc
50° true





PASS or FAIL

- 11  Convert the result to knots and make an inverse sanity check using an external tool (or your calculator - which will increase the test time).













PASS or FAIL

- 12  Remove VHW sentence from the NMEA Simulator sent sentences. Verify that after 10 seconds, the STW and the true wind values indicate that that the STW has disappeared. 

 PASS or FAIL

 Add Step

RESULTS	DEFECTS	REQUIREMENTS			
Status	Test Plan Run	Assigned To	Updated At↑	Actions	
▶▶ Skip	TPR47 dashboard_tactics_pi_...	 Petri Makijarvi	a day ago		
▶▶ Skip	TPR43 dashboard_tactics_pi_...	 Petri Makijarvi	19 days ago		
▶▶ Skip	TPR44 dashboard_tactics_pi_...	 Petri Makijarvi	19 days ago		
▶▶ Skip	TPR42 dashboard_tactics_pi_...	 Petri Makijarvi	28 days ago		
▶▶ Skip	TPR41 dashboard_tactics_pi_...	 Petri Makijarvi	29 days ago		
<div><div><div>«</div><div><</div><div>1</div><div>2</div><div>></div><div>»</div></div></div>					

ACTIVITY	HISTORY	COMMENTS			
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